

Claims

- 1 1. A rapid coupling comprising
2 a bush (10);
3 a pipe nipple (12) adapted to be inserted into the bush (10) and having on
4 its outer surface an engagement section (17, 28) of reduced or increased dia-
5 meter;
6 a locking element (23) which is provided in the bush (10) and which, upon
7 engagement with the engagement section (17, 28) of the pipe nipple (12), retains
8 the latter in the coupled state in the bush (10); and
9 a compression spring (19) disposed between an inner stop (18) of the bush
10 (10) and an insertion end (16) of the pipe nipple (12),
11 **characterised** in that the locking element (23) is disposed at such a loca-
12 tion adjacent to an insertion end (13) of the bush (10) and the compression spring
13 (19) is dimensioned in such a way that, in the uncoupled state, the compression
14 spring (19) pushes the pipe nipple (12) out of the bush (10) to such an extent that
15 the engagement section (17, 28) is located outside the bush (10).
- 1 2. The rapid coupling of claim 1, wherein the engagement section of the pipe
2 nipple (12) is formed as a groove (17) and a recess (24) is provided in the bush
3 (10), the recess (24) having three successive regions (25...27) with diameters
4 decreasing in the axial direction toward the insertion end (13) of the bush (10), the
5 diameter of the inner region (25) being at least equal to the outer diameter of the
6 pipe nipple (12) plus twice the radial thickness of the locking element (23), and the
7 diameter of the centre region (26) corresponding to the diameter of the groove
8 (17) plus twice the radial thickness of the locking element (23).
- 1 3. The rapid coupling of claim 2, wherein the diameter of the outer region (27)
2 of the recess (24) is larger than the outer diameter of the pipe nipple (12) to an
3 extent which enables an unlocking tool to be inserted.
- 1 4. The rapid coupling of claim 2 or 3, wherein the locking element is a resilient
2 retaining ring (23), the inner diameter of which, in the relieved state, is smaller
3 than the outer diameter of the pipe nipple (12).

1 5. The rapid coupling of claim 1, wherein the engagement section of the pipe
2 nipple (12) is formed as a projection (28), and a recess (34) with two successive
3 regions (35, 37) is provided in the bush (10), the diameter of the outer region (37)
4 adjoining the insertion end (13) of the bush (10) corresponding to the outer dia-
5 meter of the projection (28), and the diameter of the inner region (35) being at
6 least equal to the outer diameter of the projection (28) plus twice the radial thick-
7 ness of the locking element (23).

1 6. The rapid coupling of claim 5, wherein the locking element is a resilient
2 retaining ring (23), the inner diameter of which, in the relieved state, is smaller
3 than the outer diameter of the projection (28) of the pipe nipple (12).